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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,211	09/21/2001	William Dudley Currie	DN2001,175USA	5155

7590

09/25/2003

Howard M. Cohn  
c/o Ronald P. Yaist, Dept. 823  
The Goodyear Tire & Rubber Company  
1144 East Market Street  
Akron, OH 44316-0001

EXAMINER

KNABLE, GEOFFREY L

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/960,211

Applicant(s)

CURRIE ET AL.

Examiner

Geoffrey L. Knable

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 11 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: \_\_\_\_\_

1. Note: At page 1 of the specification, reference is made to this application being a "continuation in part" of another application. In addition to the need to update this with the serial number, it is also noted that there is no reference in the declaration to this application being a CIP of that other application. Is this application intended to be a CIP of that other application? Clarification is required.

2. Applicant's election without traverse of group I, claims 1-10, in Paper No. 4 is acknowledged.

3. Claims 11 and 12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 4.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nojiri et al. (US 5,433,814) or Wollbrinck et al. (US 5,405,484).

Both Nojiri et al. (esp. fig. 1) and Wollbrinck et al. (esp. figs. 2 and 2A) clearly disclose tire building drums including center and end sections, the end sections including expandable bead lock segments having outer "fingers" adapted to grip the beads. Further, elongate links configured between axially movable means and radially movable means are provided, these being selectively actuated by pistons. Insofar as the pistons include pressure means to act upon both ends of the piston, it would seem reasonable to expect these to necessarily possess a capability to be expanded to both semi-expanded and fully expanded conditions as desired. Further, even if it were deemed that such capability is not necessarily present, it would have been obvious for the artisan to provide control means for the air flows to the two sides of the pistons, such including appropriate flexible controls for the timing and degrees of such flows, such being considered to render the claimed capability obvious even if not considered implicit. Such would satisfy the requirements of claims 1 and 2.

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8. Claims 1-7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Adachi (US 5,273,599) or Felten (US 3,816,218).

Both Adachi (esp. fig. 1) and Felten (note esp. figs. 3-5) clearly disclose a tire building drum including center and end sections, the end sections including expandable bead lock segments having outer "fingers" adapted to grip the beads. Further, elongate links configured between axially movable means and radially movable means are provided in each patent, these being selectively actuated by pistons. Insofar as the pistons include pressure means to act upon both ends of the piston, it would seem reasonable to expect these to necessarily possess a capability to be expanded to both semi-expanded and fully expanded conditions as desired. Further, even if it were deemed that such capability is not necessarily present, it would have been obvious for the artisan to provide control means for the air flows to the two sides of the pistons, such including appropriate flexible controls for the timing and degrees of such flows, such being considered to render the claimed capability obvious even if not considered implicit. Such would satisfy the requirements of claims 1 and 2.

As to claim 3, Adachi discloses a cylinder containing two pistons (12 and 18), the pistons being connected to what can be termed carrier rings that are linked to radial expandable segments with axial piston movement being transferred into radial movement. Similarly, Felten discloses a cylinder enclosing two pistons (36a, 36b), at least one of the pistons being connected at its forward end to a part that can be termed a carrier rings that cooperates with a link (68) to cause radial movement of the radially

expandable bead locking segments. Although the structure and operation of the pistons in these references would seem to somewhat differ from that *disclosed* by applicant, it would seem that at present, these disclosures would satisfy what is presently *claimed*. As to claim 4, insofar as the pistons in each reference include parts that engage one another to effect axial control of piston movement, these parts arguably extending through what can be termed an end wall of the cylinder, it would seem that the requirement of this claim is suggested (however note also the following rejection). As to claim 5-7, the two pistons are in each case selectively operated using pneumatic lines, are coaxial, and depending upon the meaning of "substantially the same outer diameter", can arguably be said to be of substantially the same outer diameter.

9. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi (US 5,273,599) or Felten (US 3,816,218) as applied above, and further in view of Mori (US 5,269,870).

As noted above, it was considered that the primary references include parts that could be considered to extend beyond the cylinder walls to control axial movement as required by claim 4. Even if not so considered, it is known in this art when controlling a multi-piston cylinder arrangement for drum expansion to include a rod extending beyond the cylinder wall to control the axial extent of the piston (note "90" in Mori), it therefore being considered obvious to include such to ensure better dimensional control over the movements of the pistons.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nojiri et al. (US 5,433,814) or Wollbrinck et al. (US 5,405,484) or Adachi (US 5,273,599) or

Felten (US 3,816,218) as applied claim 1 above, and further in view of Brey (US 3,038,526).

The primary references do not clearly suggest a center drum structure with alternating fixed and expandable segments as claimed. It however is known in this art that one improved way to configure a drum for collapse is to provide alternating segments, alternate ones of which can pivot inwards (note esp. fig. 3 of Brey), this providing a collapsing mechanism that can effect collapse in an especially small interior space. To provide such mechanism for the central drums parts in the primary references would therefore have been obvious in light of these advantages. Such would provide a drum that includes alternating expandable and fixed segments, it being noted that there is no indication in the claim of what the segments are fixed relative to or in what way they are expandable – thus, note for example that the segments 16 can be described as relatively “fixed” since they are fixed against rotation as compared to the rotatably expandable segments 17 – the present claims do not define over this.

11. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nojiri et al. (US 5,433,814) or Wollbrinck et al. (US 5,405,484) or Adachi (US 5,273,599) or Felten (US 3,816,218) as applied to claims 1 and 8 above, and further in view of Becker et al. (US 5,591,288).

The inclusion of recesses to accommodate additional tire rubber materials is known and conventional in this art as a way to help avoid air inclusions – Becker et al. is exemplary – note the entire reference. To provide such would therefore have been obvious. The claimed expansion capabilities would seem implicit in a description of an

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expandable drum as such is considered capable of expanding to any desired extent.

Likewise, correlating the end and center segment expansion is considered to have been an implicit or in any event obvious capability.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 703-308-2062. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

  
Geoffrey L. Knable  
Primary Examiner  
Art Unit 1733

G. Knable  
September 10, 2003